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Deputy Director of Central Reference

28 November 1966

Information Processing Coordinator, OBI

Requirements for Research and Development in the
Office of Basic Intelligence

Submitted herewith is a list of R&D requirements in the Office of Basic Intelligence requested in your memorandum of 9 November 1966. They are arranged according to priority and ORD interest, if any, is indicated.

1. NIS Gazetteers

The NIS Gazetteer Program involves the publication of name indices for the land areas of the world. The file of more than three million names is stored on punchcards. Approximately 250,000 names are involved in gazetteer production annually. A computerized system would have the advantages of rapid updating capability, elimination of marking diacritics by hand, upper-and-lower case typesetting, and possible inclusion in the COINS System. Preliminary study of the problem has been initiated and ORD indicated an interest in sending an observer to future study group meetings.

2. Optical Scanning of Maps or Map Manuscripts

An automatic or semi-automatic optical scanning device that would convert existing maps or map manuscripts into digital form suitable for automatic plotting is needed. The present method employs nine draftsmen and is the biggest bottleneck in the production of maps. Its solution would result in increased capability and a substantial reduction in man-hours expended per item. ORD is aware of the problem but has made no proposals.

4. Text Graphics

The implementation of the EPIC project, a computer-assisted system for the composition of NIS text for printing, has focused attention on the

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inclusion of text graphics. At the present time, thousands of graphics are incorporated into the 10,000 pages of text published annually. While the words are now automatically arranged, the photographs, charts, and maps are still manually positioned. Thus to obtain the full benefits of EPIC, the problems of correlation between text and graphics and graphic reproduction must be solved. The first question requires a software solution and the second is an equipment matter perhaps of the optical scanning specie. Since such problems are common to the publishing industry, we can assume that outside research is being undertaken. No specific interest was noted on the part of ORD.

5. Hand-Held Scanner

Abstracting and cataloging are currently performed by various methods that include clipping, underlining, copying, noting, and typing. A hand-held scanning device such as that proposed by ORD could be used for these same tasks in our Map Library and Geography Divisions. An ability to accommodate text up to 1" is needed for cataloging and small size portability is required for abstracting.

6. Improvement of Map Library services can be achieved through a better microfilm miniaturization system, including both color viewing and color print-out of copies at, or near, scale. It is felt that R&D efforts to improve color microfilm systems will eventually be successful. Improved color films, such as are being produced for EPIC projects, might have immediate applications in the present Map Library microfilm system. Appropriate tests of these new films and investigation of viewing equipment should probably be undertaken immediately. The development of a rapid, color print-out process for color microfilm is probably five or ten years in the future. The need is well recognized by both government and industry and it is felt that no special R&D efforts in behalf of MLD requirements are required at the present time. ORD is aware of the general problem.

7. Recent developments in color and high resolution television indicate possibilities for developing a video system to supplement or replace microfilm as medium for a miniaturized map storage and retrieval system. ORD might undertake some preliminary R&D on some aspects of video techniques as they relate to MLD/BI problems. A suggested project might include investigation of video tape as a storage medium for map images, considering both image quality and possibilities for image transmission between Agency facilities.

8. Remote Inquiry Stations With or Without Displays

A need exists for remote inquiry stations with or without graphic displays. Among the possible applications would be text editing, management

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information systems, data base referencing (i.e., COINS), and filing. ORD is monitoring outside developments in this field very closely.

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